

### **REMARKS**

This Amendment is submitted in reply to the First Office Action dated February 6, 2004. Applicants respectfully request reconsideration and further examination of the patent application under 37 C.F.R. § 1.111.

Upon entry of the foregoing Amendment, Claims 7-33 are pending in the application. The amendments are believed to introduce no new matter, and their entry is respectfully requested. Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider and withdraw all outstanding rejections.

#### **Consideration of Previously Filed IDS PTO-1449 Forms**

Applicants noticed that the Examiner in the present Office Action did not consider/initial several of the documents cited in the two IDSs because copies of those documents were not submitted. However, the Applicants note that these two IDSs were previously considered by the Examiner during the prosecution of the parent application. Accordingly, the Examiner should consider all of the documents cited in the two IDSs in the present application (see MPEP 609). The Applicants apologize for any confusion associated with the submission of the copies of the previously considered two IDSs. The Applicants submitted copies of the previously considered two IDSs to have the documents cited therein printed on the patent.

#### **Summary of the Examiner's Rejections**

Claims 7-33 were rejected under 35 U.S.C. 112 (second paragraph) as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicants regard as the invention.

#### **Summary of Amendment**

Applicants have amended Claims 7, 11, 15, 19, 25 and 29 to more particularly define the present invention.

#### **Remarks regarding § 112 (second paragraph) rejections**

Independent Claims 7, 11, 15, 19, 25 and 29 were rejected under 35 U.S.C. 112 (second paragraph) as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicants regard as the invention. In particular, the Examiner stated that the phrase "that indicates an actual distortion of the transmitted first impulse radio signal" and similar phrases were indefinite and unclear in context. Applicants have deleted this phrase and the similar phrases in the independent Claims 7, 11, 15, 19, 25 and 29 and added terminology or similar terminology as highlighted in the following independent Claim 7 (for example):

7. (Currently Amended) A method of intrusion detection, comprising:  
transmitting a first impulse radio signal from a first location;  
receiving the first impulse radio signal at a second location, said second location being separate from said first location, said first location and said second location associated with a protection zone;  
generating a first waveform which is a time domain representation of the received first impulse radio signal that indicates a multipath structure of a propagation channel of the transmitted first impulse radio signal;  
transmitting a second impulse radio signal from the first location;  
receiving the second impulse radio signal at the second location;  
generating a second waveform which is a time domain representation of the received second impulse radio signal that indicates a multipath structure of a propagation channel of the transmitted second impulse radio signal; and  
comparing the first waveform and the second waveform to determine whether there is a change between the first waveform and the second waveform indicative of an intruder entering the protection zone.

Amended independent Claims 11, 15, 19, 25 and 29 contains the same or similar new terminology which is emphasized above in the amended independent Claim 7.

Applicants submit that the emphasized claimed terminology such as "generating a first waveform which is a time domain representation of the received first impulse radio signal that indicates a multipath structure of a propagation channel of the transmitted first impulse radio signal" is definite and clear in context. The support for this language can be found in the patent application on page 43, line 27 thru page 44, line 17 (for example) as provided below:

"Implementing the UWB scanning receiver 900 in a multipath environment results in a scanning receiver output that represents a psuedo-channel impulse of the propagation channel. The multipath channel is characterized by the line of sight (LOS) signal (if one exists) along with delayed, attenuated copies of the transmitted signal corresponding to reflections off of objects including intruders in the environment. The multipath structure of the propagation channel is unique to the placement of objects in the protection zone as well as the placement of the transmit and receive antennas 1006 and 911, respectively. Assuming that the propagation environment is stationary (i.e. all reflective surfaces and antennas are fixed and no intruders are present), successive multipath scans taken by the scanning receiver 900 are identical. This can be verified to ensure stationarity via a simple subtraction and digital filtering of the successive scan waveforms. As described in greater detail below, the scan waveforms that are made when an intruder is not present are later compared to scan waveforms that are made when an intruder is present which enables the detection of the intruder."

As such, Applicants respectfully request removal of the §112 (second paragraph) rejections.

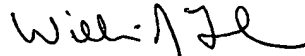
**Conclusion**

Applicants respectfully submit that all of the stated grounds of rejections have been properly traversed, accommodated, or rendered moot. Accordingly, Applicants respectfully request reconsideration of all outstanding rejections and allowance of pending Claims 7-33.

If the Examiner believes, for any reasons, that personal communication will expedite prosecution of this application the Examiner is invited to telephone the undersigned at the number provided.

It is believed that a fee is not required for this paper. If this is incorrect, the Commissioner is authorized to charge any fees which may be required for this paper to Deposit Account No. 50-1481.

Respectfully submitted,



---

William J. Tucker

Reg. No. 41,356

8650 Southwestern Blvd. #2825  
Dallas, Texas 75206-2688  
214/368-4978  
Customer No. 27512